Discus throw handbook - notebook
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Males throw with a 2 kilogram discus
Famales throw with a 1 kilogram discus

Note that males and females below the age of 19 throw with lighter weights

The discus circle is 2.5 m in diameter
The two kilogram or 4.4 lb discus has a diameter of 0.219 m
the one kilogram or 2.2 lb discus has a diameter of 0.180 m

Before starting I'd advice to do a good warm up

I'd advice to do some warm up throws to

It's best to use throwing shoes when throwing
as it's a lot better for the knees and ankles
and it makes moving around on the balls of the feet
a lot easier and smoother

Be carefull not to make too much throws per training
12 to 20 throws should be enough and reduces the chance of injuries

The discus Should be placed on the last part of the fingers

Make sure the discus leaves the hand finger after finger
The pointing finger is the last finger to have touched the discus

Keep the throwing arm fully extended
-Keep the throwing arm in the same position as in the last moment of the wind up

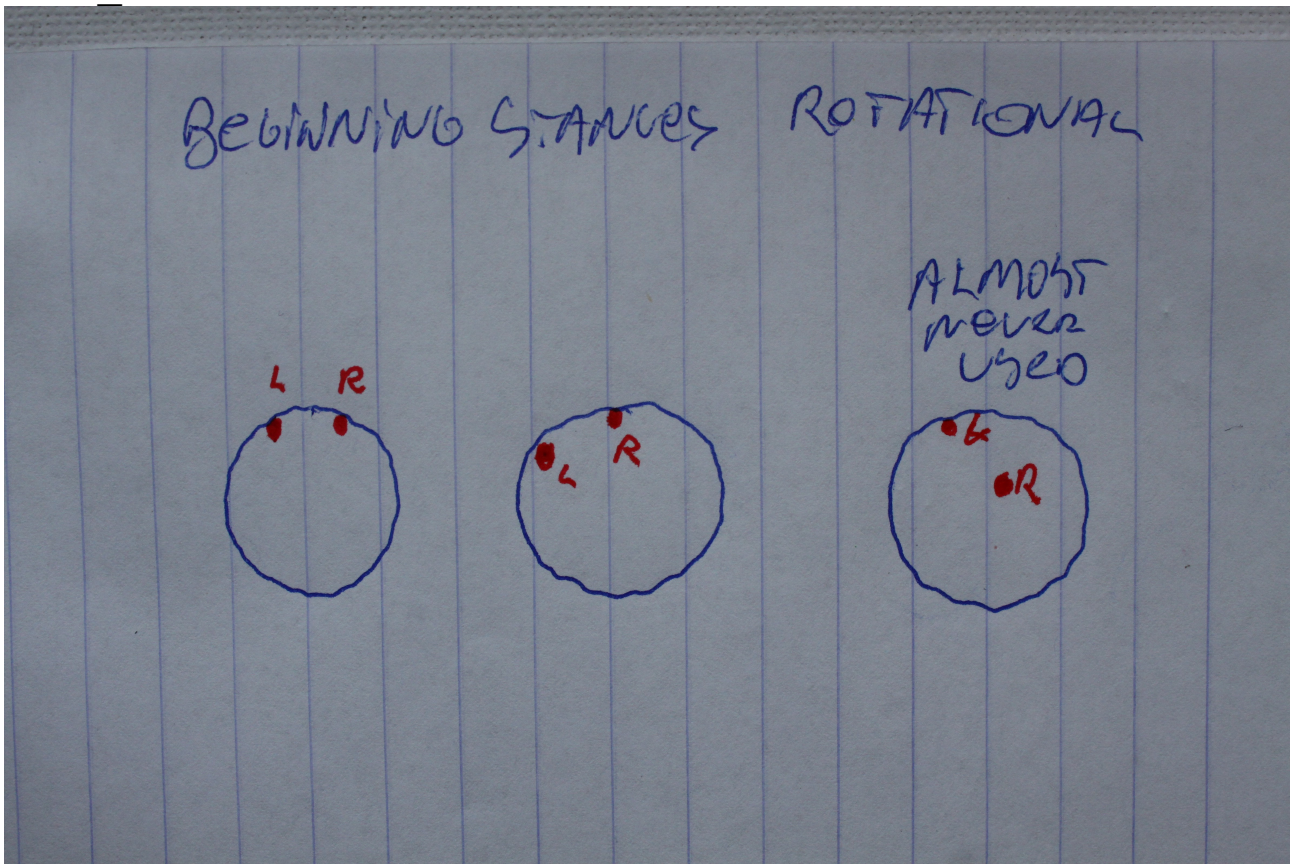
so the tension does not dissapear
And use this tension while making the throw

Throwing angles:
The throwing angle should be between a 35 degree to a 45 degree angle
Using the right angle can result in further throws

Chin angles:
Don't look down while doing the rotational or while throwing.
The chin should be up slightly when making the throw.
-Looking down while throwing also disrupts the kinetic chain and makes the inverted c less usefull

Go from low or medium low, to high and extended
If you start pretty low do squats to increase upward power

Foot placements in the beginning of the throw:
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Feet placement types:
Power stance phase:
Normal
Liniear
Closed duck
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Types of throwing:
Active release
-The feet come loose from the ground, sometimes a small jump
-just pivotting and rotating afterwards can
also be called an active release
Fixed feet release
-The feet stay fixed on the ground

Block with the left leg:
A good block equals a better throw.
Work up, push against the blocking leg
The stick method

The leg is almost fully extended
The pole vault method
Where the leg is bend, or bend a little
and while throwing extends again

Power position or powerstance:
Asuming a powerstance
One leg in front one leg behind.
The hips and shoulders should form an x seen from above
And the toes and knee should form a line with the chest, seen from above.
Between 70 to 80 percent of the bodyweight should be on the back leg
or the leg wich is leant on.
and between 20 to 30 percent of the weight on the front leg
The non throwing arm is held in front of the body

A good throw is made doing the triple extension
Using and extending the feet, legs-knees and hips to create a kinetic chain.
The turning and twisting of the body and the use of the arms make the kinetic chain
complete and add aditional power
The upper body should be strong enough to support the chain
and add aditional power.
The power for a good throw comes from the ground

Use weightshifting (that's why between 70-80 percent of the weight is on the back leg)
for even further throws.

Tips:
It's safer for the suroundings to throw in a throwing cage
when discus throwing

Always make sure the throwing area is safe

Semi rotational or greek method:
A semi rotational
The greek method starts with a twist up then the left foot is placed backward to
create a power stance

Rotational:
-This is hard to explain in text
-You can also just watch a discus throw video on a website
The rotational starts by doing a wind up to the other side of
which you're going to move to this is to create tension
You should try and maintain this tention until the throw and use it
Then the left foot turns in and the left arm moves to the side
Then the right foot makes a swaying or somewhat kicking motion
with on the end and normally a somewhat sideways kneeing
motion is made
Then there's a short air time
Then the right foot is placed and the left foot follows as soon as possible
to come into a power stance and then the throw is made
Don't forget to use the non throwing arm to block or to create
extra rotational force.

A good and active left foot and leg can result in further throws

Pivot drills:
First get used to standing on the balls of the feet
Pivot drills are done by pivotting on the balls of the feet
while rotating
90 degree turns
180 degree turns
270 degree turns
360 degree turns

Some people can even do turns between 450 and 720 degrees.
You can do this with and without the discus

Tip: Do stability exercises

Powerstance pivot drills:
180 degree turns to powerstance
Backward turns
The right leg or right feet is the one that pivots
While the left leg constantly moves backward in to a powerstance

For active release throwers who rotate pretty much after the throw could do 360 rotational jumps

Inverted C:
The body creates somewhat of an inverted C while just after the power position
and the beginning of the throw
A lot of energie is stored, produced and released this way

Interesting way of training:
Focus on;
The wind up
Turning in the left foot
The throwing arm positions throughout the throw
Non throwing arm use and positions throughout the throw
Right leg swing or kick
Getting into the powerstance
The throw and the release
-
And combine afterwards.

long stick exercise:
Use a long stick of around 2 metres
held up behind the bck with two arms just below shoulder height

or around the middle of the back
To learn better discus throwing technique;
Do rotationals, semi rotationals and power stance to throw technique
drills
-Rather not make violent movements while doing this exercise

Use a towel in the throwing hand to do rotationals semi rotationals and powerstance to throw technique drills
A traffic cone can also be used
-Rather not make violent movements while doing this exercise

Hold the discus with extended arms and do 4 to 8 circles for example
Spinning around like this will help feel rotational
forces.
And be carefull not to fall after spinning in circles

Throwing with heavier and lighter weights once in a while can be effective.

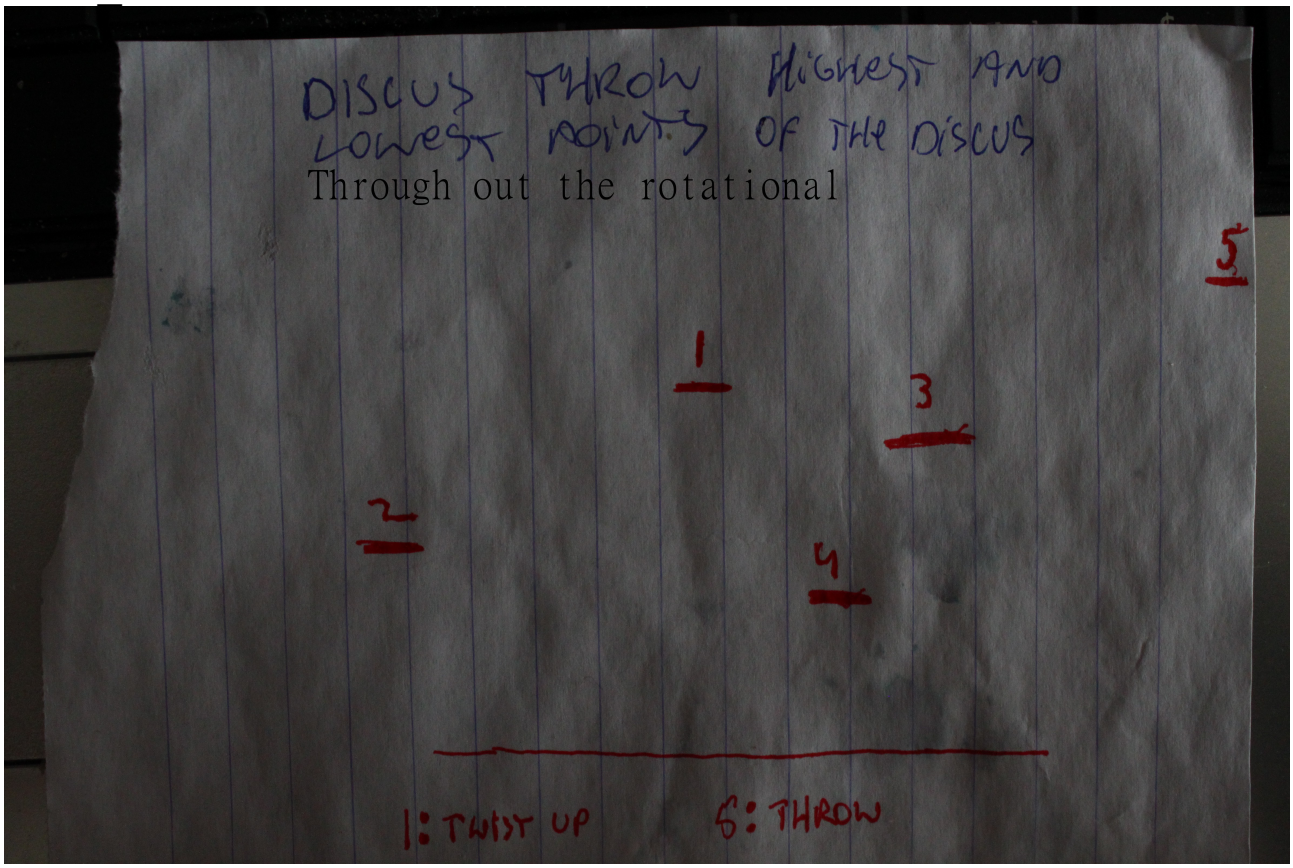
Tip:
Leg agility (agility ladder for example)
and hurdle exercises can be done to improve footwork

Tip:
In competition be carefull not to walk out of the ring to the throwing
direction as the throw will then be declared a foul
Walk out of the ring to the non throwing direction

Tip:
Check the biomechanics of the discus throw

Discus throw highest and lowest points of the discus throughout

the throw
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Myotatic reflex of the chest muscles
By winding up at the beginning tension is increased on the chest and side area
this is used and released while throwing
The non throwing hand can also be used to increase the myotatic reflex

The non throwing arm can be used multiple ways and in multiple angles
Some keep their throwing arm almost extended to a 90 degree angle
others have the arm almost completely bend.
While throwing some people go from a 90 degree angle to an almost completely
bend arm.

Arms wingspan with discus throw:
A long wingspan is something you have or you don't
Having a long arms wingspan can result in further throws
As the distance the discus travels in circles becomes longer
During the rotational

Discus releases:
Throw the discus up and catch it again
Make sure the discus rotates a lot and is thrown properly
and catched around the way you threw it up in the air
Don't throw to high just around chest or head hight is enough
Catching is much easier like this and the next release can
be made soon after

Warming up with the discus:
Discus releases
Right to left:
Throwing from one hand to the other and catch it around hips height
or slightly higher or lower
catch, hold and throw like the discus is thrown
This can also be done behind the body
Discus flips:
The discus makes a flipping motion and is catched again
don't throw it up to high

Get comfortable with the implement
Play with it

Do plyometrics like push ups and squats for overal conditioning
Rocket jumps are also very usefull

Strength power and explosivenes training
Trainings like weightlifting, hang and power version and short sprinting can be done

to develop strength, power and explosiveness

Tip:
Also do flexebility training.

Technique times of professional discus throwers:
The time starts right after the wind up until the implement leaves the hand
Elite, profesional rotational discus throwers:
around 1.10 seconds to 1.40 seconds technique times

Getting these times with good technique can take a very long time.

Good technique a lot of explosive power and good and fast speed equals a far throw
Muscle memory also plays a role

World records:
Discus throw world records:
Outdoor: 74.08 m
-He used the active release
Indoor : 69.51 m
Both done with the rotational style

Specific strength training
Squats and front squats
- One third squat
- Half squat
- Full squat (be carefull with the knees)

Bench press
Olympic weightlifting
- Power hang cleans
- Power hang snatches
- Jerks

Heel raises
Front yoke walk
 Very good for the upper body
 The bar is hold on the front not on the back
 I'd advice to start with low weights
Lunges
 With very low weights
Plate twists
 Don't throw the plate that's another exercise
Arm holds
 Hold two dumbells side ways at shoulder height with extended arms
-use medium weights and don't do it long or to many times.
Do box jumps and rocket jumps
-A weight vest could be worn
Do sprint starts
and 20-30 metres sprints